Los Alamos National Laboratory **Environmental Restoration Program** Standard Operating Procedure	No: LANL-ER-SOP-06.19 Rev: 0

Weighted Bottle Sampler for Liquids and Slurries in Tanks

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WEIGHTED BOTTLE SAMPLER FOR LIQUIDS AND SLURRIES IN TANKS

1.0 PURPOSE

This procedure describes the use of the weighted bottle sampler for liquids and slurries in tanks.

2.0 SCOPE

2.1 Applicability

This procedure is applicable to all personnel who collect liquid or slurry samples for the Environmental Restoration Program.

2.2 Training

All site workers involved with this procedure must document that they have read and understood this procedure and the procedures in Section 1.0, General Instructions.

3.0 DEFINITIONS

N/A

4.0 BACKGROUND AND/OR CAUTIONS

The weighted bottle sampler can be used to sample liquids in storage tanks, wells, sumps, and other containers. The sampler has the advantage that it remains unopened until it is at the desired sampling depth. It cannot be used to collect liquids that are incompatible with the weight and line.

The sampler consists of a glass or Teflon™ bottle, a weight, a bottle stopper, and a line that is used to lower and raise the sampler and open the bottle during sampling. There are a few variations of this sampler, as illustrated in the ASTM Methods D 270 and E 300. The ASTM sampler, which uses a metallic bottle basket and also serves as weight, is preferred. The weighted bottle sampler can either be fabricated or purchased.

The weighted bottle sampler has the following limitations:

A. The exterior of the weighted bottle sampler is exposed to hazardous materials and must be handled carefully to avoid unnecessary contamination of the immediate area.

B. The weighted bottle sampler cannot be used to collect liquids that are incompatible with the bottle, weight, or line.

C. It is difficult to use with very viscous liquids.

Site workers preparing for field operations should read and understand the procedures outlined in LANL-ER-SOPs, Section 2.0, Health and Safety in the Field. In addition, site workers should refer to site-specific Operable Unit Health and Safety plans for the particular health and safety equipment to be used.

5.0 EQUIPMENT

Weighted Bottle Sampler
Funnel
Disposable Wipes
Daily Activity Logs
Chain-of-Custody/Request-for-Analysis forms
Sample Collection Logs
Variance Logs
Custody Seals
Unique Sample Stickers
Sample Labels

6.0 PROCEDURE

A. Assemble the necessary equipment and appropriate protective clothing (SOP-02.01, Personal Protective Equipment).

B. Decontaminate all equipment before and after each use (SOP-02.07, General Equipment Decontamination).

C. Open the waste container.

D. Lower the closed weighted bottle sampler into the waste liquid to the desired depth. Record the pertinent information on the Containerized Waste Sampling Forms (SOP-06.15, Coliwasa Sampler for Liquids and Slurries). Additional field comments should be recorded on the Daily Activity Log (SOP-01.04).

E. Open the bottle stopper and collect the sample.

F. Raise the sampler out of the waste. Place the sample into a sample container (SOP-01.02, Containers, Sampling, and Preservation).

G. Repeat steps D through F until all samples have been collected.

H. Close the waste container.

I. Package all samples for transport to the Sample Coordination Facility (SCF), (SOP-01.03, Handling, Packaging, and Shipping of Samples). All sampling efforts must be coordinated with the SCF.

7.0 REFERENCES

The following procedures are directly associated with this procedure and should be reviewed before field operations:

LANL-ER-SOPs in Section 1.0, General Instructions.
LANL-ER-SOPs in Section 2.0, Health and Safety in the Field.
LANL-ER-SOP-06.15, Coliwasa Sampler for Liquids and Slurries.

EPA. November 1986. "Test Methods for Evaluating Solid Waste." Vol. II: Field Manual Physical/Chemical Methods, Officer of Solid Waste and Emergency Response, Washington D.C.

Ford, Patrick J., Paul J. Turina, and Douglas E. Seely. 1984. "Available Sampling Methods," Second Edition, Volume 2, "Characterization of Hazardous Waste Sites - A Methods Manual." U.S. Environmental Protection Agency document EPA/600/4-84/076. U.S. Government Printing Office, Washington, D.C.

8.0 RECORDS

A. Completed Containerized Waste Sampling Form

B. Completed Daily Activity Log which will include any deviations and additional comments.

9.0 ATTACHMENT

N/A